

I Claim:

1. A field-effect controllable semiconductor component,  
comprising:

a semiconductor body including a first surface, a first layer  
of a first conduction type, and a second layer of the first  
conduction type lying above said first layer;

a first terminal zone that can be contact-connected at said  
first surface of said semiconductor body, said first terminal  
zone formed in said second layer;

a channel zone of a second conduction type that surrounds said  
first terminal zone;

compensation zones of the second conduction type, said  
compensation zones formed in said second layer; and

a second terminal zone of the first conduction type that can  
be contact-connected at said first surface of said  
semiconductor body, said second terminal zone formed in the  
second layer.

2. The semiconductor component according to claim 1,  
comprising:

a connecting zone located between said second terminal zone and said first layer;

none of said compensation zones being formed in said connecting zone.

3. The semiconductor component according to claim 2, wherein said connecting zone is doped more heavily than remaining regions of said second layer.

4. The semiconductor component according to claim 3, wherein said first layer has a doping and said connecting zone has a doping that essentially corresponds to said doping of said first layer.

5. The semiconductor component according to claim 1, wherein said first layer is doped more heavily than said second layer.

6. The semiconductor component according to claim 1, wherein said semiconductor body has an edge, and said second terminal zone is formed at said edge of said semiconductor body.

7. The semiconductor component according to claim 1, comprising:

an electrically conductive layer connecting said first layer and said second terminal zone;

said semiconductor body having a side area to which said electrically conductive layer is applied.

8. The semiconductor component according to claim 1, wherein at least some of said compensation zones adjoin said channel zone.

9. The semiconductor component according to claim 1, wherein said compensation zones are designed in pillar form and extend vertically in said second layer.

10. The semiconductor component according to claim 1, wherein said second layer includes a number of charge carriers of the first conduction type and a number of charge carriers of the second conduction type that are approximately of the same magnitude.

11. The semiconductor component according to claim 1, comprising a control electrode configured adjacent said channel zone, said control electrode being insulated from said semiconductor body.

12. The semiconductor component according to claim 1,  
comprising:

a connecting zone located between said second terminal zone  
and said first layer;

said connecting zone being doped more heavily than remaining  
regions of said second layer.